## Department of Veterans Affairs Decentralized Hospital Computer Program

# MINIMAL PATIENT DATASET (MPD) TECHNICAL MANUAL

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Information Systems Center Albany, New York

## Preface

The Minimal Patient Dataset (MPD) software reads data from the MPD CD-ROM regarding patient visits and care received at VA Medical Centers (VAMCs). This manual provides technical information to assist programmers and IRM technical personnel in the operation and maintenance of the MPD software.

Preface

# Table of Contents

Introduction	
MPD Overview	1
MPD Functionality	1
Patient Locator Overview	2
Patient Locator Functionality	2
Related Manuals	3
Resource Requirements	5
Minimum Software Required	
Hardware	
Implementation and Maintenance	7
Implementation	
MPD Parameters	
Maintenance	
Temporary Files	
Recommended Distribution of Security Keys and CD-ROMs	
Routines	g
MPD Routine List with Descriptions	
Patient Locator Routine List with Descriptions	
Callable Routines	
Routines to Map	
Files	13
MPD File List with Descriptions	
PC Files	
DHCP Files	13
MPD File Flow Chart	14
Patient Locator File List with Descriptions	14
Patient Locator File Flow Chart	
Globals to Journal	14
Exported Options	15
Menu Diagrams	
PC Menu Diagram	
DHCP Menu Diagram	
Archiving and Purging	17

External Relations	19
Database Integration Agreements (DBIAs)	19
Custodial DBI Agreements	
Subscriber DBI Agreements	
Internal Relations	25
SACC Exemptions Required for the CD-ROM Server	
Package-wide Variables	
How to Generate On-line Documentation	27
Glossary	31
Appendix A. Sample HL7 Interface Specification	33
1.0 Overview	
2.0 Functionality	34
3.0 Purpose	34
4.0 Scope	35
5.0 General Specifications	
5.1 Communication Protocol	
5.2 Application Processing Rules	35
5.3 Segments	
5.4 Fields	
5.5 Messages and Associated Segments	46
5.5.1 Sample Message and Segment Exchange	
5.6 Transaction Specification	
5.6.1 General	
6.0 Tables	
Index	61

## Introduction

#### MPD Overview

The Minimal Patient Dataset (MPD) software enables DHCP personnel to search for treatment dates, treatment locations, and the type(s) of care a patient has received throughout the VA healthcare system. Interactive MPD reads the data from the MPD CD-ROM through the use of a DHCP option and returns it in List Manager screen format.

The MPD CD-ROM contains the following patient information for a specific date range (usually 1 year):

- Name
- Social Security Number (SSN)
- Year of birth
- Number of visits to VA facilities during the time period
- Visit dates
- Treating facilities
- Types of care received

The most common use of the MPD software is to determine if a patient has been treated at other VA Medical Centers (VAMCs). Once this is known, you can electronically request patient information from those facilities using the Patient Data Exchange (PDX) package.

## **MPD Functionality**

This version of the MPD package provides the following functionality:

- Ability to search for a single or multiple SSNs
- Ability to exclude a single site or multiple sites from a search
- Used by the Pharmacy Prescription Practices package
- Easy programmer interface to add MPD searches to other packages
- User can receive full information or just SSN, site, and date
- Ability for interactive searches

You must enter at least one SSN to initiate the search, but excluding sites from the search is optional.

#### **Patient Locator Overview**

The Patient Locator is an Application Programmer Interface (API) which enables DHCP personnel to search for treatment dates, treatment locations, and the type(s) of care a patient has received throughout the VA healthcare system through the use of a DHCP option. Although the Patient Locator is being released with this version of MPD, it is actually an alternative to MPD which allows users to access more current patient treatment information. MPD reads and returns data stored on a CD-ROM for a limited time period. The Patient Locator searches "live" databases (EDR and/or IPDB) for a user-specified date range and returns the following current patient information in an electronic mail message:

- Name
- SSN
- Date of birth (DOB)
- Classification (inpatient or outpatient)
- Treatment facilities
- Treatment dates
- Hospital service (Specialty for PTF, Stop Codes for OPC)
- Admitting regulation
- Primary eligibility code
- Primary diagnosis code

### **Patient Locator Functionality**

This version of the Patient Locator provides the following functionality:

- Ability to search for a single or multiple SSNs
- Ability to exclude a single site or multiple sites from a search
- Ability to search "live" EDR and/or IPDB databases for current treatment information
- Ability to search for inpatient and/or outpatient treatment episodes within a user-specified date range
- Ability to limit the search to a user-specified number of occurrences

This manual contains technical information to assist programmers and IRM technical personnel with the operation and maintenance of the MPD and Patient Locator software.

## **Related Manuals**

- MPD V. 1.0 DHCP User Manual
- MPD V. 1.0 Installation Guide
- MPD V. 1.0 IRM User Manual
- MPD V. 1.0 Package Security Guide

Introduction

## Resource Requirements

## **Minimum Software Required**

MPD V. 1.0, Kernel V. 7.1, Kernel Toolkit V. 7.2, and VA FileMan V. 20.0 are preinstalled on the enclosed 4mm DAT tape. Before installing this tape, it is recommended that your site have the following minimum package versions running:

DHCP		CD-RO	CD-ROM Server	
Package Name	Version #	Package Name	Version #	
VA Kernel Toolkit	7.2	MS-DOS (and associated CD-ROM Extensions - pre- installed)	3.0	
VA List Manager	1.0	MSM - PC/PLUS w/ NET (pre-installed)	4.0	
Order Entry/Results Reporting	2.5			
MailMan	7.1			
DHCP HL7	1.5			
Kernel	7.1			
VA FileMan	20.0			

#### Hardware

The CD-ROM Server must be installed on a personal computer (PC) platform with the following minimum hardware:

- PC with monitor and keyboard
- StorageWorks
- 2.0 GB hard drive
- 4mm tape drive
- CD-ROM Reader
- Network Board supported by MSM-NET
- The Encryptor (DES Board by Jones Futurex, Inc.)

Resource Requirements

## Implementation and Maintenance

#### **Implementation**

Please refer to the MPD V. 1.0 Installation Guide for instructions in performing the following:

- Hardware setup
- Software setup
- Allocation of security keys

Please refer to the MPD V. 1.0 IRM User Manual for the following information:

- Menus and options used by IRM Service personnel to operate, configure, and maintain the MPD software
- Troubleshooting tips
- Flow diagrams

#### **MPD Parameters**

The parameters in the VAM - PARAMETER file (#394.99) are pre-set by the package developers, and no further action is required at the site.

#### Maintenance

- After setup of the hardware, installation of the software, and verification that
  the system is working properly, you should backup the entire 2.0 GB hard drive.
  This should be the only backup required. Exceptions would be backups required
  by future patches.
- Change the CD-ROM when a new one is received.
- Keep the server running.

## **Temporary Files**

Temporary files are stored in the ^TMP("VAMC"), global, which should be checked periodically to ensure that the software cleans it up. See the IRM User Manual if the ^TMP("VAMC") global requires cleaning.

## **Recommended Distribution of Security Keys and CD-ROMs**

To insure the security of the database, the CD-ROM and the required encryption key will be sent in two different mailings. The security key(s) for this package will be sent to the Information Security Officer (ISO); CD-ROMs will be sent to IRM Service at each site.

# Routines

## **MPD Routine List with Descriptions**

ROUTINE NAME	DESCRIPTION
VAMCC	CD-ROM Client
VAMCCKEY	Post Key To CD-ROM Server
VAMCI001, VAMCI002, VAMCI003, VAMCI004,	Inits for CD-ROM Server
VAMCI005, VAMCI006, VAMCI007, VAMCI008,	
VAMCI009, VAMCI00A, VAMCI00B, VAMCI00C,	
VAMCI00D, VAMCI00E, VAMCI00F, VAMCI00G,	
VAMCI00H, VAMCI00I, VAMCI00J, VAMCI00K,	
VAMCI00L, VAMCI00M, VAMCI00N, VAMCI00O,	
VAMCI00P, VAMCINI1, VAMCINI2, VAMCINI3,	
VAMCINI4, VAMCINI5, VAMCINIS, VAMCINIT	
VAMCNTEG	Package Checksum Checker
VAMCS	Main CD-ROM Server Routine
VAMCS01, VAMCS02	CD-ROM Server Routine (Cont.)
VAMCS10	CD-ROM Server Utilities
VAMCS11, VAMCS12, VAMCS13	CD-ROM Server Utilities
VAMCSDP1	DDP Global Utilities
VAMCSDS0	MPD DES Routine
VAMCSDS1, VAMCSDS2	DES Utility Routines
VAMCSUO1, VAMCSUO2, VAMCSUO3	Server Options
VAMCSUT1, VAMCSUT2, VAMCSUT3	MPD Utility Routines
VAMCSUT4, VAMCSUT5, VAMCSUT6, VAMCSUT7,	CD-ROM Server Utilities
VAMCSUT8	
VAMCXR01	Cross-Reference Utilities
VAMIN001, VAMIN002, VAMIN003, VAMIN004, VAMINIS,	Inits for DHCP System
VAMINIT, VAMINIT1, VAMINIT2, VAMINIT3, VAMINIT4,	
VAMINIT5	
VAMNTEG	Package Checksum Checker
VAMPAPI0	API For MPD
VAMPCFG	Return MPD CD-ROM
	Configuration Information
VAMPDSP	Interactively Request and Display
	MPD Information
VAMPDSP1	Display SSNs
VAMPDSP2	Display Matches for Chosen SSN
VAMPDSP3	Display Visits for Chosen Matches
VAMPKEY	Post MPD Key to CD-ROM Server
VAMPO001, VAMPONI1, VAMPONI2, VAMPONI3,	Onits for DHCP
VAMPONIT	
VAMPPL	VA List Manager Init for DHCP
	System
VAMPPOST, VAMPPST1, VAMPPST2	Post-Init Routines
VAMPSCON	Return Configuration Information

## MPD Routine List with Descriptions, cont.

ROUTINE NAME	DESCRIPTION
VAMPSFU1	Read Information from MPDB
VAMPSFU2	Sort/Return MPDB to Client
VAMPSFUL	Return MPD Information

## **Patient Locator Routine List with Descriptions**

ROUTINE NAME	DESCRIPTION	
VAMAPI10	Patient Locator API (text)	
VAMAPI11	Patient Locator API (up to 20 SSN in QRD/QRF)	
VAMPRC00	Extracts patient locator information	
	Gets internal file entry number for VAM - PATIENT	
	LOCATOR CONTROL file (#394.91)	
	Deletes entry in VAM - PATIENT LOCATOR CONTROL file	
	(#394.91)	
	Loads HL7 text into VAM - PATIENT LOCATOR CONTROL	
	file (#394.91) for merge	
VAMPRC01	Main processing routine for ADR response	
VAMPRC02	Success ACK	
	Clean up	
VAMPRC03	Send mail message	
VAMPRC04	Notify user of results	
VAMPRC05	Data compare, merge data	
VAMREQ00	Interactive request for Patient Locator API	
VAMREQ01	Prompts for SSN to process	
VAMREQ02	Prompts for sites to exclude	
VAMREQ03	Prompts for notify list	
VAMREQ04	Prompts for starts/stop date	
	Prompts for database from which to extract	
	Prompts for occurrences	
VAMTRN02	Transmit query	
VAMTRN03	Files data in VAM - PATIENT LOCATOR CONTROL file (#394.91)	
VAMTRN04	Transmits an ACK	
VAMUTL01	Various utility functions	
VAMUTL02	Partial lookup against input array	

#### **Callable Routines**

#### \$\$MPD^VAMPAPI0(IN,OUT,SCHM,CRIT,BUFFER,WAIT,STARTAT)

This API is the programmer entry point for requesting MPD information. It can be used to query the CD-ROM server and return data read from the MPD CD-ROM. A private database integration agreement (DBIA) is required to use this API. Please refer to the External Relations section of this manual for more information about MPD DBIAs.

# \$\$PL^VAMAPI11(SSNROOT,RESROOT,DBASE,MODE,STRTDT,ENDDT,OCCUR, VTYPE,EXCROOT,NOTROOT)

This API is the programmer entry point for requesting Patient Locator information. It is used to query both the EDR and IPDB databases for determining where a veteran has received medical treatment. The API interacts with the DHCP HL7 package to send and receive HL7 queries and results. Documentation is in VAMAPI10: code is in VAMAPI11.

#### **Required Input Variables**

SSNROOT	Name of global containing array of SSN(s) to search for (full global reference)	
RESROOT	Name of global used to return data to application (full global reference)	
DBASE	Database to extract data from	
	• E - EDR (BDC)	
	• I - IPDB (Hines)	
	B - Both (data merged from both)	
MODE	Batch/interactive	
	BAT - Batch	
	INT - Interactive	
NOTROOT	Name of global containing array of users to notify that results have returned	

## **Optional Input Variables**

STRTDT	Date to start searching from		
	(VA FileMan format)		
	Null = last encounter only		
ENDDT	Date to start searching to (can exceed current date)		
	(VA FileMan format)		
	Null = last encounter only		
OCCUR	Occurrence limit within date range		
	Null - unlimited		
	• 1 - last encounter		
	# - amount specified, up to 5 digits		

#### Callable Routines, cont.

Continuation of \$\$PL^VAMAPI11(SSNROOT,RESROOT,DBASE,MODE,STRTDT, ENDDT,OCCUR,VTYPE,EXCROOT,NOTROOT)

## Optional Input Variables, cont.

VTYPE	Visit type
	MRI - Inpatient only
	MRO - Outpatient only
	OTH - Both inpatient/outpatient
EXCROOT	Name of global containing array of sites to exclude from search

#### **Output Variables**

OUTPUT(s):	0 - OK
	-1^error text

#### Format of output array:

@RESROOT@("DB",n)=DISPLAY DBASE^COMPARE FLAG

@RESROOT@(SSN,"PID",SEQ)=PATIENT NAME^DOB

@RESROOT@(SSN,"PV",SEQ,FACILITY #,VISIT #)=

ADMIT DATE^PATIENT CLASS^ATTENDING DOCTOR^HOSPITAL SERVICE^

ADMITTING REGULATION/REASON

@RESROOT@(SSN,"PVDG",SEQ,FACILITY #,VISIT #,n)= DIAGNOSIS CODE

@RESROOT!(SSN,"PVEL",SEQ,FACILITY #,VISIT #,n)= ELIGIBILITY

NOTE: 1) Facility # and visit # in PV must match facility # and visit # in PVDG and PVEL.

2) SEQ - Used for patients with same SSN but different name or DOB.

#### **Routines to Map**

There are no routines to map in the MPD package.

# Files

## **MPD File List with Descriptions**

## **PC Files**

FILE#	FILE NAME	<u>DESCRIPTION</u>	
394.92	VAM - MPD CARE CODES	This file contains mappings of care codes stored on the CD-ROM to human-readable text. These entries should not be edited.	
394.94	VAM - CONTROLLER	This file contains information about the CD-ROM Server. The entries may be edited if certain errors appear. (Please refer to "What to do if the CD-ROM Server Will Not Start" in the Troubleshooting Tips section of the MPD V. 1.0 IRM User Manual for further information.)	
394.95	VAM - CD-ROM	This file contains information about the CD-ROM that is mounted in the CD-ROM drive. The entries in this file have been pre-set by the package developers and should not be changed.	
394.96	VAM - SEARCH SCHEME	This file contains information about the search schemes used and statistics about previous queries. The entries in this file can be viewed by using the [VAMC SINGLE SCHEME STATS] and [VAMC ALL SCHEME STATS] menu options. The entries can be reset by using the [VAMC RESET SINGLE SCHEME STATS] option.	
394.97	VAM - LOCATION	This file is used to store information concerning all locations containing a CD-ROM.	
394.98	VAM - REQUEST	This file is used to transfer data between DHCP and the CD-ROM Server.	
DHCP Files			
394.99	VAM - PARAMETER	This file contains MPD configuration information.	

## **MPD File Flow Chart**

FILE#	FILE NAME	POINTS TO	POINTED TO BY
394.92	VAM - MPD CARE CODES		
394.94	VAM - CONTROLLER		
394.95	VAM - CD-ROM	394.97 VAM - LOCATION	394.97 VAM - LOCATION
394.96	VAM - SEARCH SCHEME		
394.97	VAM - LOCATION	394.95 VAM - CD-ROM	394.95 VAM - CD-ROM
394.98	VAM - REQUEST		
394.99	VAM - PARAMETER		

## **Patient Locator File List with Descriptions**

FILE #	FILE NAME	<u>DESCRIPTION</u>
394.91	VAM - PATIENT LOCATOR CONTROL	This file contains information related to the processing of Patient Locator information.

## **Patient Locator File Flow Chart**

FILE # FILE NAME		POINTS TO		POINTED TO BY
394.91	VAM - PATIENT LOCATOR CONTROL	200	NEW PERSON	

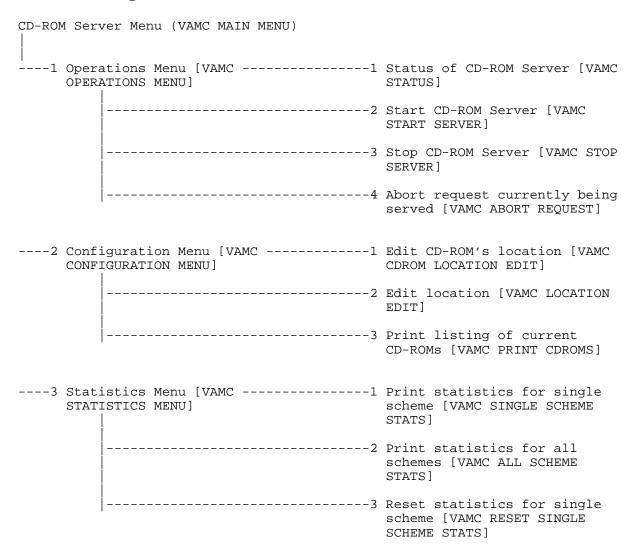
## **Globals to Journal**

There are no globals to journal in this version of MPD.

## **Exported Options**

#### **Menu Diagrams**

### **PC Menu Diagram**



## Menu Diagrams, cont.

## **DHCP Menu Diagram**

```
Main MPD Menu (VAMP DHCP MENU)

----1 Interactive MPD [VAMP MPD INTERACTIVE SEARCH]

----2 Request configuration information [VAMP CONFIG INFO]

----3 Post encryption/decryption key [VAMP KEY POSTING]

**LOCKED: VAMP POST KEY**

----4 Patient Locator
[VAMP PATIENT LOCATOR]
```

# Archiving and Purging

There are no package-specific archiving and purging procedures or recommendations for this version of MPD.

Archiving and Purging

## **External Relations**

Please refer to the Resource Requirements Section of this manual for information about the required hardware and minimum software requirements.

#### **Database Integration Agreements (DBIAs)**

#### **Custodial DBI Agreements**

```
1152
              NAME: VAM
  CUSTODIAL PACKAGE: MINIMAL PATIENT DA
                                                  Albany
SUBSCRIBING PACKAGE: PHARMACY PRESCRIPT
                                                  Albany
             USAGE: Private APPROVED: APPROVED STATUS: Active EXPIRES:
           DURATION: Till Otherwise Agr VERSION:
              FILE:
                                            ROOT:
        DESCRIPTION:
                                            TYPE: Routine
    ROUTINE: VAMPAPIO
   COMPONENT: MPD
   VARIABLES: IN
                           Input
                                    Full Global Reference to a global
                                    containing an array of SSNs
               OUT
                           Input
                                    Full Global Reference for location of
                                    where information will be returned to
               SCHM
                           Input
                                    Search scheme to use- Supported schemes:
                                    MPD**00001 - Return full information
MPD**00002 - Return site information
                                    (for use with PPP)
                                    MPD**00003 - Return CD-ROM information
               CRIT
                           Input
                                    Input criteria - Full global reference to
                                    an array containing a list of sites to
                                    exclude. Global has the form:
                                    ^^^_
                                        -Global
                                                 - Site number.
                                         Name
                                    So CRIT would look like:
                                    ^["TRN", "KER"]GLOBAL
               WAIT
                           Input
                                    How long to wait for the server to
                                    acknowledge the request (else fail saying
                                    the server is busy)
               STARTAT
                           Input
                                    SSN to start searching at. The server
                                    will begin searching at that SSN in the
                                    input array.
```

#### **Custodial DBI Agreements, cont.**

DBIA #1152, cont.

```
BUFFER
                           Input
                                    Sets the size of the output buffer. It
                                    is up to the client application to take
                                    SSNs out of the output array and clear it
                                    once the data has been read.
                  MPD^VAMPAPIO(IN,OUT,SCHM,CRIT,BUFFER,WAIT,STARTAT)
Format of output array:
      OUTARR(SSN, "PATIENTS") = # unique patients^total # visits
      OUTARR(SSN, "PATIENTS", n) = SSN^name^YOB^# visits
(1)
      OUTARR(SSN, "PATIENTS", n, m) = site #^site name^date^care
(1)
           OUTARR(SSN, "FOUND") = # unique patients
                                                   =-1^Error text
(1,2)
         OUTARR(SSN, "MOST_RECENT") = date^site
(1,2) OUTARR(SSN, "SITES", site) = most recent date
          OUTARR("STATUS")=code^text
# (1,2)
                                             0 = Currently running
                                             1 = Successfully completed
                                            -1 = Error
  (1,2)
           OUTARR("RANGE")=FileMan date range for DB
           OUTARR("DONE", SSN) = "" - Search for this SSN is done
  (1,2)
      (3) OUTARR("STDATE")=Starting date for offset in FM format
#
      (3) OUTARR("RANGE") = Date range of CD - start^end - FM
#
      (3) OUTARR("UNIQR")=Number of unique records
      (3) OUTARR("UNIQP")=Number of unique patients
#
      (3) OUTARR("TINV")=Total inpatient visits
#
     (3) OUTARR("TOPV")=Total outpatient visits
#
     (3) OUTARR("AVGS")=Average visit per SSN
#
#
     (3) OUTARR("AVGP")=Average visit per unique patient
      (3) OUTARR("AANOTE")=Comments for this particular MPDB
```

- 1) # means node is always returned.
- 2) Numbers in parentheses tell which scheme returns this node. (OUT will contain requested information.)
- 3) If an array is passed in, it must be a full global reference.

20

#### **Subscriber DBI Agreements**

```
NAME: DBIA1161-A
      1161
  CUSTODIAL PACKAGE: DRG GROUPER
                                                  Albany
SUBSCRIBING PACKAGE: MINIMAL PATIENT DA
                                                  Albany
             USAGE: Private APPROVED: APPROVED STATUS: Pending EXPIRES:
           DURATION: Till Otherwise Agr VERSION:
              FILE:
                                            ROOT: ICD9(
       DESCRIPTION:
                                            TYPE: File
   Converts IDC9 codes to there text equivalents
     ^ICD9(FE,
               CODE NUMBER
      .01
                                     0;1
                                              Direct Global Read
              DIAGNOSIS
                                     0;3
                                              Direct Global Read
                                              Diagnosis that the code
                                              represents
       Contains all valid ICD diagnosis codes
    ROUTINE:
      1162
              NAME: DBIA1161-B
  CUSTODIAL PACKAGE: REGISTRATION
                                                  Albany
SUBSCRIBING PACKAGE: MINIMAL PATIENT DA
                                                  Albany
             USAGE: Private APPROVED: APPROVED
STATUS: Pending EXPIRES:
                                        EXPIRES:
             STATUS: Pending
           DURATION: Till Otherwise Agr VERSION:
              FILE: 43.4
                                            ROOT: DIC(43.4,
       DESCRIPTION:
                                            TYPE: File
   Convert specialty code to its text equivalent
     ^DIC(43.4,AEDR,CODE,
               NUMBER
       .01
                                     0;1
                                              Direct Global Read
                                              Admitting regulation number
               NAME
                                     0;1
                                              Direct Global Read
                                              The name of the VA admitting
                                              regulation
       The file contains the recognized VA admitting regulations under which
        a patient may be admitted to a VA facility
```

ROUTINE:

#### Subscriber DBI Agreements, cont.

```
NAME: DBIA1161-C
      1163
  CUSTODIAL PACKAGE: REGISTRATION
                                                  Albany
SUBSCRIBING PACKAGE: MINIMAL PATIENT DA
                                                  Albany
             USAGE: Private APPROVED: APPROVED STATUS: Pending EXPIRES:
           DURATION: Till Otherwise Agr VERSION:
              FILE: 40.7
                                            ROOT: DIC(40.7,
        DESCRIPTION:
                                            TYPE: File
   Convert Specialty code to its text equivalent
     ^DIC(40.7,C,CODE
               AMIS REPORTING STOP 0;2
                                              Direct Global Read
                                              This field contains the number
                                              related to the stop code that
                                              is used when generating the OPC
                                              file.
       .01
              name
                                     0;1
                                              Direct Global Read
                                              Contains the name of the clinic
                                              stop code.
        This file contains all Clinic Stops and their associated AMIS stop
        codes.
     ROUTINE:
      1164
              NAME: DBIA1161-D
  CUSTODIAL PACKAGE: REGISTRATION
                                                 Albany
SUBSCRIBING PACKAGE: MINIMAL PATIENT DA
                                                 Albany
             USAGE: Private APPROVED: APPROVED STATUS: Pending EXPIRES:
           DURATION: Till Otherwise Agr VERSION:
              FILE: 42.4
                                          ROOT: DIC(42.4,
        DESCRIPTION:
                                           TYPE: File
   Convert specialty code to text equivalent
     ^DIC(42.4,CODE,
       .01
              NAME
                                     0;1
                                              Direct Global Read
                                              The field contains the name of
                                              the specialties allowable for
                                              selection through PTF.
        The file contains recognized PTF treating specialties.
     ROUTINE:
```

#### **Subscriber DBI Agreements, cont.**

```
NAME: DBIA1169-A
     1169
 CUSTODIAL PACKAGE: HEALTH LEVEL SEVEN
                                                Albany
SUBSCRIBING PACKAGE: MINIMAL PATIENT DA
                                                 Albany
            USAGE: Private APPROVED: APPROVED STATUS: Pending EXPIRES:
          DURATION: Till Otherwise Agr VERSION:
              FILE: 771.5
                                           ROOT: HL(771.5,
       DESCRIPTION:
                                           TYPE: File
  Check for existence of version 2.2 in 771.5. If missing add via FileMan
     ^NONE
              VERSION NUMBER
      .01
                                  0;1
                                             Both R/W w/FileMan
                                             Add version 2.2 if it doesn't
                                             exit
       A list of HL7 versions supported by the DHCP site
    ROUTINE:
  COMPONENT: 2.2
  VARIABLES:
     1170
              NAME: DBIA1169-B
 CUSTODIAL PACKAGE: HEALTH LEVEL SEVEN
                                               Albany
SUBSCRIBING PACKAGE: MINIMAL PATIENT DA
                                                 Albany
            USAGE: Private APPROVED: APPROVED
STATUS: Pending EXPIRES:
            STATUS: Pending
                                       EXPIRES:
          DURATION: Till Otherwise Agr VERSION:
             FILE: 771.2
                                          ROOT: HL(771.2,
       DESCRIPTION:
                                           TYPE: File
  Checks and adds "ADR" message type if it does not exist in HL7 MESSAGE
   TYPE file (#771.2).
     ^NONE
              ABBREVIATED NAME
                                   0;1
      .01
                                             Both R/W w/FileMan
                                             The three character HL7 message
                                             type abbreviation
       A list of HL7 messages supported by the DHCP site
    ROUTINE:
```

**External Relations** 

## **Internal Relations**

All of the MPD options are independently invocable.

## **SACC Exemptions Required for the CD-ROM Server**

The following modules required SACC exemptions:

MODULE	DESCRIPTION	APPROVAL DATE
VAMCSDS0	"Z" calls	08/25/94
VAMCSDS1	"Z" calls	08/25/94

## **Package-wide Variables**

There are no package-wide variables used by this version of MPD.

**Internal Relations** 

## How to Generate On-Line Documentation

This section describes some of the various methods by which users may secure MPD technical documentation. On-line technical documentation pertaining to the MPD software, in addition to that which is located in the help prompts and on the help screens which are found throughout the MPD package, may be generated through utilization of several Kernel options. These include but are not limited to %INDEX; Menu Management, Inquire (Option File) and Print Option File; VA FileMan Data Dictionary Utilities, List File Attributes.

Entering question marks at the "Select ... Option:" prompt may also provide users with valuable technical information. For example, a single question mark (?) lists all options which can be accessed from the current option. Entering two question marks (??) lists all options accessible from the current one, showing the formal name and lock for each. Three question marks (???) displays a brief description for each option in a menu while an option name preceded by a question mark (?OPTION) shows extended help, if available, for that option.

For a more exhaustive option listing and further information about other utilities which supply on-line technical information, please consult the DHCP Kernel Reference Manual.

#### %Index

This option analyzes the structure of (a) routine(s) to determine in part if the routine(s) adhere(s) to DHCP Programming Standards. The %INDEX output may include the following components: compiled list of Errors and Warnings, Routine Listing, Local Variables, Global Variables, Naked Globals, Label References, and External References. By running %INDEX for a specified set of routines, the user is afforded the opportunity to discover any deviations from DHCP Programming Standards which exist in the selected routine(s) and to see how routines interact with one another, that is, which routines call (or are called by) other routines.

To run %INDEX for the MPD package, specify the following namespace(s) at the "routine(s)?>" prompt: VAM

#### %Index, cont.

MPD initialization routines which reside in the UCI in which %INDEX is being run, as well as local routines found within the VAM namespace, should be omitted at the "routine(s)?>" prompt. To omit routines from selection, preface the namespace with a minus sign (-), as shown in the following list.

-VAMCI*	Inits for CD-ROM Server
-VAMCNTEG NTEG for CD-ROM Server	
-VAMI*	Inits for DHCP System
-VAMNTEG	NTEG for DHCP System
-VAMPO*	Onits for DHCP System
-VAMPPL	VA ListMan inits for DHCP System

## **Inquire (Option File)**

This Menu Management option provides the following information about a specified option(s): option name, menu text, option description, type of option and lock, if any. In addition, all items on the menu are listed for each menu option.

To secure information about MPD options, the user must specify the name or namespace of the option(s) desired. The namespace associated with the MPD package is VAM.

## **Print Option File**

This utility generates a listing of options from the OPTION file. The user may choose to print all of the entries in this file or may elect to specify a single option or range of options. To obtain a list of MPD options, the following option namespace should be specified: VAM.

#### **List File Attributes**

This VA FileMan option allows the user to generate documentation pertaining to files and file structure. Utilization of this option via the "Standard" format will yield the following data dictionary information for a specified file(s).

- File name and description
- Identifiers
- Cross-references
- Files pointed to by the file specified
- Files which point to the file specified
- Input, print, and sort templates

#### List File Attributes, cont.

In addition, the following applicable data is supplied for each field in the file: field name, number, title, global location, description, help prompt, cross-reference(s), input transform, date last edited, and notes.

Using the "Global Map" format of this option generates an output which lists all cross-references for the file selected, global location of each field in the file, input templates, print templates, and sort templates. For a comprehensive listing of MPD files, please refer to the Files Section of this manual.

How to Generate On-Line Documentation

# Glossary

API Application Programmer's Interface

CD-ROM Compact Disk-Read Only Memory

A disk containing encrypted data that can be read but

cannot be altered.

Decryption Unscramble encrypted data so it is readable.

Encryption Scramble sensitive information so it is unreadable.

Interactive MPD Program that allows a user to submit an MPD query and

displays the returned information.

Key Used by encryption algorithm as a basis for scrambling.

List Manager Software product designed to display information in

hierarchical screen format.

MPD Client Used by Interactive MPD and Pharmacy Prescription

Practices to post a query or begin a search.

MPD Server System that searches the CD-ROM for data and returns it

to the MPD Client.

PDX Patient Data Exchange

Software application used to get more detail about patient

visits at another facility.

PPP Pharmacy Prescription Practices

DHCP software designed to prevent multiple prescriptions

at different sites.

Pseudo SSN SSN calculated and assigned to a patient who was not

given an SSN by the Social Security Administration (SSA).

Scheme Method of searching.

SSN Social Security Number

Glossary

# Appendix A. Sample HL7 Interface Specification

# PATIENT LOCATOR HL7 INTERFACE SPECIFICATION FOR EDR AND IPDB DATABASES

#### **JULY 1994**

#### 1.0 Overview

This document provides a detailed description of the functionality that the Patient Locator Application Programmer Interface (API) provides to the EDR database located at the Boston Development Center (BDC) and the IPDB database located at Hines. The Patient Locator API queries both databases and merges the returned data to display all VA facilities where a patient has received treatment. This API has been developed as part of the DHCP Event Driven Reporting (EDR) package, in the VAF namespace. The Patient Locator API is listed in the Routines Section of the MPD V. 1.0 Technical Manual as a supported reference call (documentation in VAMAPI10; actual call in VAMAPI11). This allows any package requiring Patient Locator information to access it without a formal integration agreement. This document also provides a detailed listing of all the elements that are transferred between the Patient Locator API and the BDC/Hines databases. The HL7 protocols are used to transfer all data. A sample call is provided to show interested parties how it works.

The Patient Locator API enables DHCP personnel to search for treatment dates, treatment locations, and the type(s) of care a patient has received throughout the VA Healthcare System. The requested information is returned in an electronic mail message to the user-specified recipients. The most common use of the Patient Locator API is to determine if a patient has been treated at other VA Medical Centers (VAMCs). Once this is known, you can electronically request patient information from those facilities using the Patient Data Exchange (PDX) package.

#### 2.0 Functionality

The Patient Locator API provides BDC/Hines with the following user-specified criteria to perform the search.

USER ENTRY	OPTIONAL/REQUIRED	NOTES
A single SSN	Required	A single SSN is the only requirement for
		activating the search.
Multiple SSNs	Optional	
Date range	Optional	If no date range is specified, the last
		encounter date by facility is extracted.
Occurrence limit	Optional	Null - unlimited
		1 - last encounter by facility only
		# -maximum # of occurrences per
		patient
Site(s) to exclude	Optional	You can exclude one or many sites, such as
from the search		your own, or all sites within a particular
		region.

The following information is returned from the EDR database at BDC based on user-specified input. The shaded area repeats for each patient's encounter at a facility.

DESCRIPTION OF DATA	HL7 SEGMENT RETURNED IN
Patient Name	PID
Patient SSN	PID
Patient DOB	PID
Patient Class (inpatient/outpatient)	PV1
Place(s) of Treatment (facility)	PV1
Date(s) of Treatment	PV1
Hospital Service	PV1
Attending Doctor	PV1
Admitting Regulation	PV2
Eligibility Code (primary)	ZEL
DXLS (diagnosis code, primary)	DG1

#### 3.0 Purpose

Several development initiatives currently require access to the EDR/IPDB databases through a DHCP API. The Patient Locator API allows other applications to extract information from the EDR/IPDB databases to determine where a patient has received treatment. Pharmacy Prescription Practices (PPP) and the Master Veteran Record (MVR) (not released software) are two examples of applications that might require this type of functionality.

#### 4.0 Scope

This document describes the messages and the data exchanged between the DHCP applications using the Patient Locator API and the information returned from the two databases (Boston Development Center's [EDR] and Hines [IPDB]).

#### **5.0 General Specifications**

#### 5.1 Communication Protocol

The DHCP MailMan electronic mail system is used as the lower level communication protocol for sending HL7 messages between the applications using the Patient Locator API.

#### **5.2 Application Processing Rules**

The HL7 protocol itself describes the basic rules for processing a message for both the sending and receiving systems. The HL7 V. 2.2 protocol is used for the transmission of the Patient Locator data between the sending and receiving applications. The V. 2.2 protocol has been greatly expanded, eliminating the need to create "Z" segments, which are required by the V. 2.1 protocol. Patient Query messages are sent to the BDC/Hines for processing. This trigger event results in the BDC/Hines returning an ADR (ADT Response) with the specified data, which is combined and displayed to the user.

#### 5.3 Segments

The following HL7 segments are used to support the exchange of Patient Locator data.

SEGMENT NAME	DESCRIPTION
MSH	Message header
MSA	Message acknowledgment
QRD	Query definition
QRF	Query filter
PID	Patient identification
PV1	Patient visit
PV2	Patient visit - additional information
DG1	Diagnosis information
ZEL	VA-defined segment (containing eligibility data)

#### 5.4 Fields

The segment definition tables list and describe the data fields in the segments and characteristics of their usage. The following information is specified about each data field.

ABBREVIATED NAME	FULL NAME	DESCRIPTION
SEQ	Sequence #	The ordinal position of the data field within the
		segment.
LEN	Length	The maximum number of characters that one
		occurrence of the data field might occupy in any
		message. (The shaded box at the bottom of this column
		contains the total segment length.)
DT	Data Type	Restrictions on the contents of the data field as defined
		in the HL7 standard.
R/O	Optionality	Whether the field in the segment is required or
		optional. The designations are
		R - Required
		0 (or null) - Optional
RP/#	Repetitions	Whether the field in the segment may repeat. The
		designations are
		N (null) - No repetition allowed
		Y - The field may repeat an indefinite or site-
		determined number of times.
		(Integer) - The field may repeat up to the number of
		times specified in the integer.
	Element name	Identifies the contents of the data field.

The following pages define the segments, data fields, and sequences used to construct the HL7 messages for the Patient Locator. Default values are specified where appropriate, and examples are provided.

**MSH** Message Header Segment for Query from sending application

CEO	LENI	DT	D/0	DD/#	111 7	TDI #	EL EMENTENIANTE	CONTENTALADIADIE
SEQ	LEN	DT	R/0	RP/#	HL7	TBL#	ELEMENT NAME	CONTENT/VARIABLE
1	1	ST	R				Field Separator	HLFS
2	4	ST	R				Encoding	HLECH
							Characters	
3	15	ST					Sending	HLDAN
							Application	
4	20	ST					Sending Facility	\$P(HLNDAPO,U,2)
5	15	ST					Receiving	\$P(HLNDAPO,U,1)
							Application	
6	30	ST					Receiving Facility	\$P(HLNDAPO,U,3)
7	26	TS					Date/Time of	HLDT1
							Message	
8	40	ST					Security	NULL
9	7	CM	R			0076	Message Type	"QRY~A19"
10	20	ST	R				Message Control ID	XYYMMDD~HHMMSS
11	1	ID	R			0103	Processing ID	HLPID
12	8	ID	R			0104	Version ID	HLVER
	187							Total segment length

#### The following are the contents of the Message Header Segment:

1. Field Separator Value = ^

2. Encoding Characters - Component separator = ~

Repetition separator = |Escape character = \

- Sub component separator = &

3. Sending Application MPD-PL

4. Sending Facility
 5. Receiving Application
 Sending facility #, ^DIC(4, EDR-PL or IPDB-PL

Receiving Application
 Receiving Facility
 Date/Time of Message
 Security
 EDR-PL or IPDB-PL
 Receiving facility #, ^DIC(4,
 Date/time message sent
 Not used, send null

9. Message Type "QRY"~"A19"

10. Message Control ID dbase\_date~time~sequence number

11. Processing ID - D - Debugging - P - Production

- T - Training

12. Version ID 2.2

#### **Example MSH segment**

MSH^~|\&^MPD-PL^500^IPDB-PL^1000^19950311083924^^QRY~A19^I930611~094021~001^P^2.2

NOTE: EDR/IPDB will need to define an MSH segment for returning the data.

#### **MSA** Message Acknowledgment Segment

SEQ	LEN	DT	R/0	RP/#	HL7	TBL#	ELEMENT NAME	CONTENT/VARIABLE
1	2	ID	R			0008	Acknowledgment	See table.
							Code	
2	20	ST	R				Message Control ID	Same as Field #10 of
								MSH
3	80	ST					Text Message	
	102							Total segment length

The following are the contents of the Message Acknowledgment Segment:

1. Acknowledgment Code See HL7 Table 008.

2. Message Control ID Used to associate response with original message. Should

match value in Field #10 of MSH message.

3. Text Message Free text field, further describes error condition.

#### **Example MSA segment**

MSA^AA^A19^I930611~094021~001^

NOTE: 1) This segment will be returned from the receiving application with the data.

2) This segment will also be sent to the receiving application once processed by sending application.

# **QRD** Query Definition Segment (will be echoed back in the response by receiving application)

SEQ	LEN	DT	R/0	RP/#	HL7	TBL#	ELEMENT NAME	CONTENT/VARIABLE
1	19	TS	R				Query Date/Time	HLDT1
2	1	ID	R			0106	Query Format Code	"R"
3	1	ID	R			0091	Query Priority	"I"
4	10	ST	R				Query ID	Sequential number
								starting at 1
7	10	CQ	R			0126	Quantity Limited	See below.
							Request	
8	20	ST	R	Y			Who Subject Filter	SSN *
9	3	ID	R			0048	What Subject Filter	See below.
10	20	ST	R				What Department	NULL
							Data Code	
	256							Total segment length

<sup>\*</sup> This field can repeat for up to 20 SSNs.

The following are the contents of the Query Definition segment:

1. Query Date/Time Date the query was generated by the application

2. Query Format Code - D - Response is in display format

- R - Response is in record-oriented format (default)

3. Query Priority - D - Deferred

- I - Immediate (default)

4. Query ID Unique identifier for query; assigned by query application

Sequential number starting at 1Returned by responding application

7. Quantity Limited Request Used to control the number of occurrences extracted

- Null = Unlimited within date range (no date, no limit)

- 1 = Last occurrence per facility

- # = Number specified within data range (up to 5 digits)

- Piece 2 of this field is "ZO" for locally-defined limit

8. Who Subject Filter
9. What Subject Filter
Identifies the subject - SSN
MRI - Inpatient only

- MRO - Outpatient only

10. What Department Data Code Not being used (null)

#### **Example QRD segment**

QRD^19930611083924^R^I^199308011025^^1|Z0^110607878|^MRI|MRO^

#### **QRF** Query Filter Segment (optional segment)

SEQ	LEN	DT	R/0	RP/#	HL7	TBL#	ELEMENT NAME	CONTENT/VARIABLE
1	20	ST	R				Where Subject Filter	"PL"
2	19	TS					When Start Date	YYYYMMDD
3	19	TS					When End Date	YYYYMMDD
4	20	ST		Y			What User Qualifier	Exclude location number
	78							Total segment length

The following are the contents of the Query Filter Segment:

1. Where Subject Filter Identifies the department, system or subsystem to which

the query pertains ("PL")

2. When Start Date Current date or user-specified

- (YYYYMMDD)

3. When End Date Current date minus 12 months or user-specified

- (YYYYMMDD)

4. What User Qualifier A list of locations to exclude from the search,

separated by repetition delimiter. Could be null.

 $- \ Will \ contain \ suffix, \ if \ applicable, \ for \ multiple \ divisional$ 

sites

#### **Example QRF segment**

QRF^PL^19940801^19930801^500|126

#### **PID** Patient Identification (required segment)

SEQ	LEN	DT	R/0	RP/#	HL7	TBL#	ELEMENT	CONTENT/VARIABLE
							NAME	
1	4	SI					Set ID	Sequential number
2	16	CK					Patient ID	SSN
							(external)	
3	16	CM	R				Patient ID	DFN
							(internal)	
5	48	PN	R				Patient Name	See below for format.
7	8	TS					DOB	YYYYMMDD
19	16	CK					SSN - Patient	999999999
	108							Total segment length

#### The following are the contents of the Patient Identification segment:

1. Set ID Sequential number starting at 1

2. Patient ID (external) VAMPID, which is SSN

3. Patient ID (internal) DFN (whatever internal pointer the BDC uses)

5. Patient Name Last name ~ first name ~ middle ~ suffix ~ prefix ~ degree

7. DOB Date of birth (yyyymmdd)

- (IPDB can only send year for OP.)

19. SSN - Patient Social Security Number (xxxxxxxxx)

#### **Example PID segment**

PID^1^110607878^000001^^PODOLEC~JEFFREY~F^^19481212^^^^^^^110607878

NOTE: IPDB contains initials only, not first name.

#### **PV1** Patient Visit (required segment)

SEQ	LEN	DT	R/0	RP/#	HL7	TBL#	ELEMENT	CONTENT/VARIABL
							NAME	E
1	4	SI					Set ID - Patient Visit	Sequential number
2	1	ID	R			0004	Patient Class	See below.
7	60	CN				0010	Attending Doctor	See below.
10	3	ID				0069	Hospital Service	See below.
						0079	_	
39	7*	ID				0115	Servicing Facility	facility number~suffix
44	19	TS					Admit Date/Time	YYYYMMDDHHMM
	94							Total segment length

<sup>\*</sup> Does not match HL7 Version 2.2 Standard definition for segment length.

The following are the contents of the PV1 segment:

Set ID - Patient Visit
 Used to specify multiple visits
 Sequential number starting at 1

2. Patient Class - E - Emergency

I - Inpatient O - Outpatient P - Pre-admit

7. Attending Doctor Physician id ~ last name ~ first name ~ middle

- (IPDB unable to send for OP)

10. Hospital Service See Table 0079. (Two tables in one: one is Outpatient

codes, the other is Inpatient codes.) Facility numbers (File #4 of DHCP)

39. Servicing Facility Facility numbers (File #4 of DHCP)
44. Admitting Date/Time Date/time (YYYYMMDDHHMM)

#### **Example PV1 segment**

PV1^1^I^^^^0001~PODOLEC~JEFFREY~F^^^1^^^^^^^^^^^^^^^^^^^^^^^^^^

NOTE: 1) IPDB database does not contain physician - unable to transmit.

- 2) PV1 segment should be returned in reverse chronological order.
- 3) Piece off suffix for multidivisional sites (use "~" as delimiter).

#### **PV2** Patient Visit (additional Information)

SEQ	LEN	DT	R/0	RP/#	HL7	TBL#	ELEMENT NAME	CONTENT/VARIABLE
3	15	CE				VA10	Admitting Regulation/	See table.
							Admitting Reason	
7	2	ID				0079	Stop Code	See table.

#### The following are the contents of the PV2 segment:

1. Admitting Regulation/ VA ADMITTING REGULATION file (#43.4)
Admitting Reason

7. Visit User Code VA-defined table (Stop codes)

#### **Example PV2 segment**

PV2^^^1^^^101

NOTE: IPDB database does not contain Admitting Regulation/Admit Reason "Unable to Transmit".

#### **DG1** Diagnosis

SEQ	LEN	DT	R/0	RP/#	HL7	TBL#	ELEMENT NAME	CONTENT/VARIABLE
1	4	SI	R				Set ID - Diagnosis	1
2	2	ID	R			0053	Diagnosis Coding Method	19
3	8	ID					Diagnosis Code	ICD Code
6	2	ID	R			0052	Diagnosis/DRG Type	See table.
	16							Total segment length

#### The following are the contents of the DG1 segment:

1. Set ID - Diagnosis Sequential number identifying transaction

- Sequential number starting at 1

2. Diagnosis Coding Method Value = 19 ICD9 (See Table 0053.)

3. Diagnosis Code ICD Codes

6. Diagnosis/DRG Type Type of code being sent out. (See Table 0052.)

#### **Example DG1 segment**

DG1^1^19^580.89^^^FI

#### **ZEL** VA Specific Patient Eligibility Segment

SEQ	LEN	DT	R/0	RP/#	HL7	TBL#	ELEMENT NAME	CONTENT/VARIABLE
1	4	SI	R				Set ID	Sequential number (1 is always primary eligibility)
2	2	ST				VA004	<ul><li>Eligibility for Outpatient</li><li>C&amp;P Status Codes for Inpatients</li></ul>	ELIGIBILITY (Multiple 361 Field .01)
	6							Total segment length

The following are the contents of the ZEL segment:

1. Set ID Always 1

2. Eligibility Code See VA Table VA004. (Two tables in one: one is Eligibility

for Outpatient, the other is C&P Status Codes for

Inpatients.)

#### **Example ZEL segment**

ZEL^1^1

#### 5.5 Messages and Associated Segments

The following HL7 messages are used to support the exchange of Patient Locator data. Following is a sample of a message and segment exchange.

```
QRY - Query
  MSH
           - Message Header
           - Query Definition (repeat for each SSN)
  QRD
  [QRF] - Query Filter
ADR - ADT Response
  MSH
              - Message Header
  MSA
              - Message Acknowledgment
                       (will repeat for each SSN)
  {
              - Query Definition
     QRD
              - Patient Identification
     PID
                       (all visits, at all sites or last visit at all
  {
                        sites, depending on query)
     PV1
              - Patient Visit
     [PV2]
             - Patient Visit -additional info.
              - Diagnosis information (primary)
     [DG1]
              - VA defined Segment for eligibility data (primary)
     [ZEL]
        }}
```

#### 5.5 Messages and Associated Segments, cont.

#### 5.5.1 Sample message and segment exchange

```
1. QRY - from sending application:
 MSH
 QRD
 QRF
2. ADR - response from receiving application:
 MSH
 MSA
    QRD - patient 1
    PID - visit data 1
    PV1
    PV2
    DG1
    ZEL
       QRD - patient 2
       PID - visit data 2
       PV2
       DG1
       ZEL
         PV1 - patient 2, visit data 2
         PV2
         DG1
         ZEL
            PV1 - patient 2, visit data 3
            PV2
            DG1
            ZEL.
```

3. ACK - requesting application acknowledges the receipt of ADR message

```
MSH (note: message type will be ACK) MSA
```

4. Cycle Complete

#### 5.6 Transaction Specification

#### 5.6.1 General

The Patient Locator API sends a HL7 query message to the BDC to extract Patient Locator information. The BDC accepts the query and returns an ADR (ADT Response) with the appropriate data.

A) Query Data Transmission from EDR application to BDC QRY - Query
 MSH - Message Header QRD - Query Definition (repeat for each SSN)
 [QRF] - Query Filter

Each query will contain up to 100 QRD segments or 100 SSN(s) to process.

B) Response Transmission from BDC to EDR application ADR - ADT Response

```
MSH
            - Message Header
MSA
            - Message Acknowledgment
                     (will repeat for each SSN)
   QRD
            - Query Definition
            - Patient Identification
   PID
{
                     (all visits, at all sites or last
                     visit at all sites, depending on
                     query)
   PV1
            - Patient Visit
            - Patient Visit -additional info.
   [PV2]
           - Diagnosis information (primary)
   [DG1]
   [ZEL]
            - VA defined Segment for eligibility data (primary)
      }}
```

NOTE: 1) If patient not found, return segments through PID, all fields will be null, except ssn

- 2) If no visit information found, return segments through PV1, all fields null
- 3) Return QRD for each SSN

#### 6.0 Tables

TABLE 0052 - DIAGNOSIS/DRG TYPE

Value	Description
AD	ADMIT
WK	WORKING
DC	DISCHARGE
FI	FINAL

# TABLE 0079 - HOSPITAL SERVICE / SPECIALTY (This is two tables in one: one for outpatient, and one for inpatient.)

#### **Outpatient Codes**

Value	Description
1	EMERGENCY UNIT
2	ADMITTING/SCREENING
4	PULMONARY FUNCTION
5	X-RAY
6	EEG
7	EKG
8	LABORATORY
9	NUCLEAR MEDICINE
10	ULTRASOUND
12	NURSING
13	PUB. HEALTH NURSING
14	NUTRITION/DIETETICS
15	SOCIAL WORK SVC.
17	REHAB. MEDICINE
18	AUDIOLOGY
19	SPEECH PATHOLOGY
20	PHYSICAL THERAPY
21	OCCUPATIONAL THERAPY
22	KINESIOTHERAPY
23	COMP. WORK THERAPY
24	VISUALLY IMPAIRED
25	SPINAL CORD INJURY
27	GENERAL MEDICAL
28	ALLERGY IMMUNOLOGY
29	CARDIOLOGY
30	DERMATOLOGY
31	ENDO/METAB(EXCEPT DIAB.)
32	DIABETES
33	GASTROENTEROLOGY
34	HEMATOLOGY
35	HYPERTENSION

# TABLE 0079 - HOSPITAL SERVICE / SPECIALTY, cont.

Value	Description
36	INFECTIOUS DISEASE
37	PACEMAKER
38	PUL./CHEST(TB)
38	PUL./CHEST(NON-TB)
39	RENAL/NEPHROL.(EXCEPT DIAL.)
40	RHEUMATOLOGY/ARTHRITIS
41	NEUROLOGY
42	ONCOLOGY/TUMOR
43	HBHC
46	DENTAL
48	ADULT DAY HEALTH CARE
52	GENERAL SURGERY
53	CARDIAC SURGERY
54	ENT
55	GYNECOLOGY
56	HAND SURGERY
57	NEUROSURGERY
58	OPHTHALMOLOGY
59	OPTIONETRY
60	ORTHOPEDICS
61	PLASTIC SURGERY
62	PODIATRY
63	PROCTOLOGY
64	THORACIC SURGERY
65	UROLOGY
66	VASCULAR SURGERY
67	AMBULATORY SURGERY
69	PROSTHETICS/ORTHOTICS
76	HOMELESS MENTALLY ILL OUTREACH
77	MENTAL HYGIENE(GROUP)
78	DAY TREATMENT CENTER
79	DAY HOSPITAL
80	DRUG DEPENDENCE
81	ALCOHOL TREATMENT
83	MENTAL HYGIENE(INDIV.)
84	PSYCHIATRY
85	PSYCHOLOGY
86	NEUROBEHAVIORAL
88	RE-ADJUSTMENT COUNSELING
91	PHARMACY
92	COMPUTED TOMOGRAPHY SCANS
93	RADIATION THERAPY
94	CHEMOTHERAPY

# TABLE 0079 - HOSPITAL SERVICE / SPECIALTY, cont.

Value	Description
95	AMBULATORY SURGERY SERVICES
96	BLOOD/BLOOD PRODUCTS TRANS.
97	NUCLEAR MAGNETIC RESONANCE
98	RESEARCH
99	EMPLOYEE HEALTH
101	EMERGENCY UNIT
102	ADMITTING/SCREENING
104	PULMONARY FUNCTION
105	X-RAY
106	EEG
107	EKG
108	LABORATORY
109	NUCLEAR MEDICINE
110	CARDIOVASCULAR NUCLEAR MED
111	ONCOLOGICAL NUCLEAR MED
112	INFECTIOUS DISEASE NUCLEAR MED
113	RADIONUCLIDE TREATMENT
114	SING PHOTON EMISS TOMOGRAPHY
115	ULTRASOUND
117	NURSING
118	HOME TREATMENT SERVICES
119	COMM NURSING HOME FOLLOW-UP
120	HEALTH SCREENING
121	RESID CARE PROGRAM FOLLOW-UP
122	PUBLIC HEALTH NURSING
123	NUTRITION/DIETETICS-INDIVIDUAL
124	NUTRITION/DIETETICS-GROUP
125	SOCIAL WORK SERVICE
126	EVOKED POTENTIAL
127	TOPOGRAPHICAL BRAIN MONITORING
128	PROLONGED VIDEO-EEG MONITORING
129	HYPERTENSION SCREENING
130	CHOLESTEROL SCREENING
131	BREAST CANCER SCREENING
132	MAMMOGRAM
133	CERVICAL CANCER SCREENING
134	PAP TEST
135	COLORECTAL CANCER SCREENING
136	FOBT - GUIAC SCREENING
137	ALCOHOL COUNSELING - MED CARE
138	SMOKING CESSATION
139	WEIGHT CONTROL
140	PHYS FITNESS/EXERCISE COUNSEL

# TABLE 0079 - HOSPITAL SERVICE / SPECIALTY, cont.

Value	Description
141	VET IMMUNIZATION
142	COLORECTAL CA SCREEN DIG EXAM
144	RADIONUCLIDE THERAPY
145	PHARM/PHYSIO NMP STUDIES
146	PET PET
160	CLINICAL PHARMACY
165	BEREAVEMENT COUNSELING
170	HBHC
180	DENTAL
190	ADULT DAY HEALTH CARE
201	REHABILITATION MEDICINE
202	RECREATION THERAPY SERVICE
203	AUDIOLOGY
204	SPEECH PATHOLOGY
205	PHYSICAL THERAPY
206	OCCUPATIONAL THERAPY
207	RMS INCENTIVE THERAPY
208	RMS COMPENSATED WORK THERAPY
209	VIST COORDINATOR
210	SPINAL CORD INJURY
211	AMPUTATION FOLLOW-UP CLINIC
212	EMG
213	RMS VOCATIONAL ASSISTANCE
214	CORRECTIVE THERAPY
215	SCI HOME CARE PROGRAM
301	GENERAL MEDICINE
302	ALLERGY IMMUNOLOGY
303	CARDIOLOGY
304	DERMATOLOGY
305	ENDO./METAB (EXCEPT DIABETES)
306	DIABETES
307	GASTROENTEROLOGY
308	HEMATOLOGY
309	HYPERTENSION
310	INFECTIOUS DISEASE
311	PACEMAKER
312	PUL./CHEST
313	RENAL/NEPHROL(EXCEPT DIALYSIS)
314	RHEUMATOLOGY/ARTHRITIS
315	NEUROLOGY
316	ONCOLOGY/TUMOR
317	COUMODIN CLINIC
318	GERIATRIC CLINIC

# TABLE 0079 - HOSPITAL SERVICE / SPECIALTY, cont.

Value	Description
319	GERIATRIC EVAL. & MGMT. (GEM)
320	ALZHEIMER'S/DEMENTIA CLINIC
321	GI ENDOSCOPY
322	WOMEN'S CLINIC
401	GENERAL SURGERY
402	CARDIAC SURGERY
403	ENT
404	GYNECOLOGY
405	HAND SURGERY
406	NEUROSURGERY
407	OPHTHALMOLOGY
408	OPTOMETRY
409	ORTHOPEDICS
410	PLASTIC SURGERY
411	PODIATRY
412	PROCTOLOGY
413	THORACIC SURGERY
414	UROLOGY
415	VASCULAR SURGERY
416	AMBULATORY SURGERY
417	PROSTHETICS/ORTHOTICS
418	AMPUTATION CLINIC
419	ANESTHESIA PRE-OP CONSULT
420	PAIN CLINIC
421	VASCULAR LABORATORY
422	CAST CLINIC
423	PROSTHETIC SERVICES
501	HOMELESS MENTALLY ILL OUTREACH
502	MENTAL HYGIENE-INDIVIDUAL
503	RESIDENTIAL CARE-INDIVIDUAL
504	COMMUNITY CLINIC-INDIVIDUAL
505	DAY TREATMENT-INDIVIDUAL
506	DAY HOSPITAL-INDIVIDUAL
507	DRUG DEPENDENCE-INDIVIDUAL
508	ALCOHOL TREATMENT-INDIVIDUAL
509	PSYCHIATRY-INDIVIDUAL
510	PSYCHOLOGY-INDIVIDUAL
511	NEUROBEHAVIORAL-INDIVIDUAL
512	PSYCHIATRY CONSULTATION
513	SUBSTANCE ABUSE - INDIVIDUAL
514	SUBSTANCE ABUSE - HOME VISIT
515	CWT/TR-HCMI
516	PTSD - GROUP

# TABLE 0079 - HOSPITAL SERVICE / SPECIALTY, cont.

Value	Description
517	CWT SUBSTANCE ABUSE
518	CWT/TR-SUBSTANCE ABUSE
519	SUBSTANCE USE DISORDER (SUPS)
520	LONG-TERM ENHANCEMENT, INDIVID
521	LONG-TERM ENHANCEMENT, GROUP
522	HUD/VASH
523	METHADONE MAINTENANCE
524	SEXUAL TRAUMA COUNSELING
540	PCT POST-TRAUMATIC STRESS
541	PTSD POST-TRAUMATIC STRESS
550	MENTAL HYGIENE-GROUP
551	COMMUNITY CLINIC-GROUP
552	COMMUNITY DAY PROGRAM
	DAY TREATMENT-GROUP
553 554	DAY HOSPITAL-GROUP
555	DRUG DEPENDENCE-GROUP
556	ALCOHOL TREATMENT-GROUP
557	PSYCHIATRY-GROUP
558	PSYCHOLOGY-GROUP
559	NEUROBEHAVIORAL-GROUP
560	
	SUBSTANCE ABUSE - GROUP
562	PTSD - INDIVIDUAL
571	READJUSTMENT COUNSELING CROUD
572	READJUSTMENT COUNSELING-GROUP
573	INCENTIVE THERAPY
574	COMPENSATED WORK THERAPY
575	VOCATIONAL ASSISTANCE
601	ACUTE HEMODIAL TREATMENT
602	CHRON ASSISTED HEMODIAL TREAT
603	LIM SELF CARE HEMODIAL TREAT
604	HOME HEMODIAL TRAINING TREAT
605	ACUTE PERITONEAL DIAL TREAT
606	CHRON ASSISTED PERIT DIALYSIS
607	LIM SELF CARE PERIT DIALYSIS
608	HOME PERITONEAL DIAL TRAINING
701	HYPERTENSION SCREENING
702	CHOLESTEROL SCREENING
703	MAMMOGRAM
704	PAP TEST
705	FOBT - GUIAC SCREENING
706	ALCOHOL SCREENING
707	SMOKING CESSATION
708	NUTRITION SCREENING

#### TABLE 0079 - HOSPITAL SERVICE / SPECIALTY, cont.

#### Outpatient Codes, cont.

Value	Description
709	PHY FIT/EXERCISE COUNSELING
710	VET INFLUENZA IMMUNIZATION
711	INJURY COUNSEL/SEAT BELT USAGE
725	DOMICILIARY OUTREACH SERVCIES
726	DOM AFTERCARE - COMMUNITY
727	DOMICILIARY AFTERCARE - VA
900	SPECIAL SERVICES
902	COMPUTED TOMOGRAPHY SCANS
903	RADIATION THERAPY
904	CHEMOTHERAPY
905	AMBULATORY SURGERY SERVICES
906	BLOOD/BLOOD PRODUCTS TRANS.
907	NUCLEAR MAGNETIC RESONANCE
999	EMPLOYEE HEALTH

#### TABLE 0079 - HOSPITAL SERVICE / SPECIALTY, cont.

# **Inpatient Codes**

Value	Description
1	ALLERGY
2	CARDIOLOGY
3	PULMONARY, TUBERCULOSIS
4	PULMONARY, NON-TB
5	GERONTOLOGY
6	DERMATOLOGY
7	ENDOCRINOLOGY
8	GASTROENTEROLOGY
9	HEMATOLOGY/ONCOLOGY
10	NEUROLOGY
11	EPILEPSY CENTER
12	MEDICAL ICU/CCU
14	METABOLIC
15	GENERAL (ACUTE MEDICINE)
16	CARDIAC-STEP DOWN UNIT
17	TELEMETRY
19	STROKE UNIT
20	REHABILITATION
21	BLIND REHAB
22	SPINAL CORD INJURY
23	INPT. PRIMARY CARE MEDICINE

# TABLE 0079 - HOSPITAL SERVICE / SPECIALTY, cont.

Inpatient Codes, cont.

Value	Description
25	PSYCH RESIDENT REHAB TMNT PROG
26	PTSD RESIDENTIAL REHAB PROG
27	SUBSTANCE ABUSE RESD TMNT PROG
28	HOMELESS CWT/TRANSIT. RESID
29	SUB. ABUSE CWT/TRANSIT. RESID.
31	GEM ACUTE MEDICINE
32	GEM INTERMEDIATE
33	GEM PSYCHIATRY
34	GEM NEUROLOGY
35	GEM REHABILITATION MEDICINE
40	INTERMEDIATE MEDICINE
50	GENERAL SURGERY
51	GYNECOLOGY
52	NEUROSURGERY
53	OPHTHALMOLOGY
54	ORTHOPEDIC
55	OTORHINOLARYNGOLOGY
56	PLASTIC SURG, INC HEAD/NECK
57	PROCTOLOGY
58	THORACIC SURGERY, INC CARDIAC
59	UROLOGY
60	ORAL SURGERY
61	PODIATRY
62	PERIPHERAL VASCULAR
63	SURGICAL ICU
64	INPATIENT PRIMARY CARE-SURGERY
70	ACUTE PSYCHIATRY (<45 DAYS)
71	LONG TERM PSYCHIATRY (>45 DAYS)
72	ALCOHOL TREATMENT
73	DRUG TREATMENT
74	SUBSTANCE ABUSE
75	HALFWAY HOUSE
76	PSYCHIATRIC MENTALLY INFIRM
77	EVAL/BRF TRMT PTSD UNIT (EBTPU)
78	INPT. PRIMARY CARE-PSYCH. WARD
79	SIPU (SPEC INPT PTSD UNITS)
80	NHCU
81	GEM NURSING HOME
83	RESPITE CARE
84	SUBSTANCE ABUSE INTERMED. CARE
85	DOMICILIARY
86	DOMICILIARY SUBSTANCE ABUSE
87	GEM DOMICILIARY
31	GENI DOMICILIANI

#### TABLE 0079 - HOSPITAL SERVICE / SPECIALTY, cont.

Inpatient Codes, cont.

88	DOMICILIARY PTSD
89	STAR I, II & III
90	SUB. ABUSE STAR I, II & III
98	NON-DOD BEDS IN VA FACILITY
99	DOD BEDS IN VA FACILITY

#### TABLE VA004 - ELIGIBILITY FOR OUTPATIENT

Value	Description
1	SERVICE CONNECTED 50% TO 100%
2	AID & ATTENDANCE
3	SC LESS THAN 50%
4	NSC, VA PENSION
5	NSC
6	OTHER FEDERAL AGENCY
7	ALLIED VETERAN
8	HUMANITARIAN EMERGENCY
9	SHARING AGREEMENT
10	REIMBURSABLE INSURANCE
11	DOM. PATIENT
12	CHAMPVA
13	COLLATERAL OF VET.
14	EMPLOYEE
15	HOUSEBOUND
16	MEXICAN BORDER WAR
17	WORLD WAR I
18	PRISONER OF WAR

#### TABLE VA004 - C&P STATUS CODES FOR INPATIENTS

Value	Description
1	COMP/SC COND >10%
2	NON-COMP/SC COND<10%
3	COMP/SC (+10%) NO MED CARE
4	NON-COMP(-10%) SC NO MED CARE-VA
	PENSION
5	VA PENSION-NO SC COND
6	NON-COMP(-10%) SC NO MED CARE NO
	PENSION
7	NO PENSION-NO SC
8	FOR NON-VET

#### TABLE VA10 - ADMITTING REGULATION

Value	Description
1	ACTIVE PSYCHOSIS 17.33
2	ACTIVE SERVICE 17.46(b)
3	ALLIED VETERANS 17.46(b)
4	AO/IR/EC EXPOSURE 17.47(a)(5)
5	CATEGORY A INCOME VETERANS 17.47(a)(7)
6	CATEGORY C INCOME VETERANS 17.47(d)
7	CHAMPVA 17.54
8	COMMUNITY NURSING HOME CARE 17.51
9	CZECH AND POLISH VETERANS 17.55
10	DISCHARGED FOR DISABILITY 17.47(a)(2)
11	DOMICILIARY CARE 17.47(e)(1)
12	ELIGIBLE FOR STATE MEDICAID 17.48(d)(1)(i)
13	EMERGENCY FOR PUBLIC 17.46(c)(1)
14	FEE SVC FOR MB,WW1,A&A,HB 17.50b(a)(2)(iii)
15	FEE SVC FOR OPT/NSC 17.50b(a)(2)(ii)
16	FEE SVC FOR VETS 50% OR MORE 17.50b(a)(2)(i)
17	FORMER PRISONER OF WAR 17.47(a)(4)
18	HOSP/NH IN PHILLIPINES (NONVA) 17.38
19	IN RECEIPT OF VA PENSION 17.47(a)(7)
20	INELIGIBLE/PRESUMED DISCHARGE 17.46(c)(2)
21	NON-VA (AK,HA,VI,TERR) 17.50b(a)(6)
22	NON-VA (DISABILITY DISCHARGED) 17.50b(a)(1)(ii)
23	NON-VA (P&T DISABILITY) 17.50b(a)(1)(iii)
24	NON-VA EMERGENCY (WHILE IN VA) 17.50b(a)(3)
25	NON-VA FOR ADJUNCT CONDITION 17.50b(a)(1)(iv)
26	NON-VA FOR FEMALE VETERANS 17.50b(a)(4)
27	NON-VA FOR SC DISABILITY 17.50b(a)(1)(i)
28	NON-VA FOR VOCATIONAL REHAB 17.50b(a)(1)(v)
29	NON-VA/UNAUTH FOR SC COND 17.80(a)(1)
30	NONVA EMERG DURING AUTH TRAVEL 17.50b(a)(8)
31	NONVA INDEP VA OPT CLINICS 17.50b(a)(9)
32	NONVA/UNAUTH (ADJUNCT COND) 17.80(a)(2)
33	NONVA/UNAUTH (P&T DISABILITY) 17.80(a)(3)
34	OBSERVATION & EXAMINATION 17.45
35	OPT DENTAL (POW >90 DAYS) 17.50(a)(7)
36	OTHER FEDERAL AGENCIES 17.46(b)
37	PRESUMPTION OF SC 17.35(b)
38	RECEIPT/ELIGIBLE 38 USC 1151 17.47(a)(3)
39	RESEARCH PATIENTS - VETERANS 17.47Z
40	RESEARCH VOLUNTEERS (NONVET) 17.46(c)
41	SAW, MB, & WW1 17.47(a)(6)
42	SC VET FOR ANY CONDITION 17.47(a)(1)
43	SHARING AGREEMENT 17.46(d)
44	STATE NH, DOM OR HOSP. 17.1666d

# TABLE VA10 - ADMITTING REGULATION, cont.

Value	Description
45	VA EMPLOYEES/FAMILY 17.46(c)(3)
46	VOCATIONAL REHABILITATION 17.80(a)(4)

Appendix A. Sample HL7 Interface Specification

# Index

Appendix A. Sample HL7 Interface Specification	33
Application Processing Rules (Appendix A)	35
Archiving and Purging	17
Callable Routines	11
Communication Protocol (Appendix A)	35
Custodial DBI Agreements	
Database Integration Agreements (DBIAs)	19
DHCP Menu Diagram	
Exported Options	
External Relations	19
Fields (Appendix A)	
Files	13
Functionality (Appendix A)	34
General (Appendix A - Transaction Specification)	48
General Specifications (Appendix A)	35
Globals to Journal	14
Glossary	31
Hardware	5
How to Generate On-line Documentation	27
Implementation	7
Implementation and Maintenance	7
Internal Relations	25
Introduction	1
Maintenance	7
Menu Diagrams	
Messages and Associated Segments (Appendix A)	46
Minimum Software Required	
MPD File Flow Chart	
MPD File List with Descriptions	
MPD Parameters	
MPD Functionality	
MPD Overview	
MPD Routine List with Descriptions	

#### Index

Overview (Appendix A)	33
Package-wide Variables	25
Patient Locator File Flow Chart	14
Patient Locator File List with Descriptions	
Patient Locator Functionality	
Patient Locator Overview	
Patient Locator Routine List with Descriptions	
PC Menu Diagram	
Purpose (Appendix A)	
Recommended Distribution of Security Keys and CD-ROMs	8
Related Manuals	
Resource Requirements	
Routines	
Routines to Map	
SACC Exemptions Required for the CD-ROM Server	25
Sample Message and Segment Exchange (Appendix A)	
Scope (Appendix A)	
Segments (Appendix A)	
Subscriber DBI Agreements	
Tables (Appendix A)	49
Temporary Files	
Transaction Specification (Appendix A)	